PHASE I BOOK EXPLOITATION SOV/6320

Pogorelov, Alekśey Vasil'yevich

Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh. [ch.] 3: Krucheniye (Post-Buckling Behavior of Cylindrical Shells. pt. 3: Torsion). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 71 p. 3000 copies printed.

Resp. Ed.: Ya. P. Blank, Professor; Ed.: T. M. Kurilova; Tech Ed.: G. P. Aleksandrova.

PURPOSE: The book is intended for a broad circle of readers familiar with fundamentals of the shell theory and differential geometry. It can be useful to designers, students, and scientific workers in the field of shell design.

COVERAGE: The post-buckling behavior and equilibrium of a thin cylindrical shell subjected to torsion is analyzed by a method different from that used by other authors. Particularly, the critical loads are determined. This book is a continuation of

Card 1/5

two previous publications of the author under the same title. The buckling process is viewed as a geometric flexure and as a development of the wave-forming process on the shell surface. No personalities are mentioned. There are four Soviet references.

TABLE OF CONTENTS:

Ch. I. Formulation of the Problem, Investigation Method, and Results 3

Ch. II. Buckling of a Cylindrical Shell under Torsion 8
1. Equation for Lateral deflections of a cylindrical shell at the instant of buckling 8
2. Upper critical load 11
3. Some empirical data. Conception of the lower critical load 14

Ch. III. Special Isometric Transformation of a Cylindrical Surface 15
1. Circumscribing of a Z surface isometric to a circular cylinder 15

SOV/6322

PHASE I BOOK EXPLOITATION

Pogorelov, Aleksey Vasil'yevich

Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [ch.] 1: Osevoye szhatiye (Post-Buckling Behavior of Cylindrical Shells. pt. 1: Axial Compression). Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 51 p. 300 copies printed.

Resp. Ed.: Ya. P. Blank, Professor; Ed.: T. M. Kurilova; Tech. Ed.: T. M. Smilyanskaya.

PURPOSE: The book is intended for a broad circle of readers familiar with fundamentals of the shell theory and differential geometry. It can be useful to designers, students, and scientific workers in the field of shell design.

COVERAGE: The post-buckling behavior and equilibrium of an axially compressed thin cylindrical shell is investigated by a method different from that used by other authors. Particularly, the value of the lower critical load is determined. ~~The buckling~~

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PHASE I BOOK EXPLOITATION SOV/6321

Pogorelov, Aleksey Vasil'yevich

Tsilindricheskiye obolochki pri zakriticheskikh deformatsiyakh [chast' 2]: Vneshneye davleniye (Post-Buckling Behavior of Cylindrical Shells. pt. 2: External Pressure). Khar'kov, Izd-vo Khar'kovskogo univ., 1952. 60 p. 3000 copies printed.

Resp. Ed.: Ya. P. Blank, Professor; Ed.: A. N. Tret'yakova; Tech. Ed.: G. P. Aleksandrova.

PURPOSE: The book is intended for a broad circle of readers familiar with fundamentals of the shell theory and differential geometry. It can be useful to designers, students, and scientific workers in the field of shell design.

COVERAGE: The post-buckling behavior and equilibrium of a thin cylindrical shell under external pressure is analyzed by a method different from that used by other authors. Particularly, the lower critical pressure is determined. This book is a continuation

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Post-Buckling Behavior of Cylindrical Shells (Cont.) SOV/6321

of a previous publication of the author on post-buckling of cylindrical shells under axial pressure. The buckling process is viewed as a geometric flexure and as a development of the wave-forming process on the shell surface. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Ch. 1. Formulation of the Problem, Investigation Method, and Results 3

Ch. 2. Buckling of a Cylindrical Shell Under External Pressure 7

1. State of elastic equilibrium taking place in regular-type buckling 8
2. Upper critical load 10
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POGORELOV, Aleksey Vasil'yevich; BLANK, Ya.P., prof., otv. red.; TRET'YAKOVA, A.N., red.; ALEKSANDROVA, G.P., tekhn. red.; KURILOVA, T.M., red.; SMILYANSKAYA, T.M., tekhn. red.; ALEKSANDROVA, G.P., tekhn. red.

[Cylindrical shells at supercritical deformations]TSilindricheskie obolochki pri zakriticheskikh deformatsiiakh. Khar'kov, Izd-vo Khar'kovskogo univ. Vol.1.[Axial compression]Osevoe szhatie. 1962. 51 p. Vol.2.[External pressure]Vneshnee davlenie. 1962. 60 p. Vol.3.[Torsion]Kruchenie. 1962. 71 p. (MIRA 16:1) (Elastic plates and shells)

POGORELOV, B., ryadovoy.

Indicator-screwdriver. Voen. sviaz. 16 no.1:41 Ja '58. (MIRA 11:2)
(Screwdrivers)

BOYKO, Yu.A., inzh.; DOBROKHOTOV, V.I., inzh.; KISEL'GOF, M.L., kand. tekhn.nauk; PATYCHENKO, V.S., inzh.; POGORELOV, B.F., inzh.; TARELKIN, M.F., inzh.

Burning of lignite with a high moisture content. Elek. sta. 36 no.2:8-12 F '65. (MIRA 18:4)

POGORELOV, B.F., insh.

Lifting a 64-ton drum with a bridge crane of 30/5-ton capacity. Elek.sta. 31 no.5:75-78 My '60. (MIRA 13:8)

(Cranes, derricks, etc.)

POGORELOV, B.S.

Basement of the Berezovo gas-bearing region. Trudy VNIGRI no.225: 167-183 '63. (MIRA 17:3)

KAROGODIN, Yu.N.; KIZAROVSKIY, V.N.; KONORELOV, B.C.

New data on the structure and absolute age of fold basement in the northwestern part of the West Siberian Plain. Geol. i geofiz. no.5:119-123 '65. (MIRA 18:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk i Tyumenskoye geologicheskoye upravleniye.

KOSOY, A.G., inzh.; PCGOREIOI, B.V., master

Design of an automatic chamber pump. TSement 30 no.4:16-17 Jl-Ag '64. (MIRA 17:11)

1. Semipalatinskiy tsementnyy zavod.

BR

PHASE I BOOK EXPLOITATION SOV/5927

Pogorelov, Dmitriy Alekseyevich

Teoriya keplerovykh dvizheniy letatel'nykh apparatov (Theory of Keplerian Motion of Bodies in Flight) Moscow, Fizmatgiz, 1961. 106 p. 10,000 copies printed.

Ed.: V. I. Levantovskiy; Tech. Ed.: Ye. A. Yermakova.

PURPOSE: This book is intended for those readers interested in orbital flight around the earth and spaceflight.

COVERAGE: This book is intended to meet the need for a text on the theory of Keplerian motion. Attention is given to the following: properties of Keplerian motion, derivation of the basic relations between the characteristics of Keplerian motion in their application to the motion of spaceships in cosmic flight; derivation of relations connecting the trajectory parameters with the initial conditions of motion; magnitude and direction of flight velocity; angular distance and flight time for any running point of motion;

Card 1/4

BERNSHTEYN, N.D.; GOLOD, I.S.; GOLOSINSKIY, S.Ya.; ZAYTEV, A.N.; POGORELOV, E.M.; SMIRNOV, S.V.; SHAMSHTEYN, M.G.; SHMAKOV, A.G.

23KTK-1 motion-picture contact printer set. Tekh.kino i telev. 4 no.10:10-19 O'60. (MIRA 13:10)

1. TSentral'noye konstruktorskoye byuro Ministerstva kul'tury SSSR i Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut, Laboratoriya obrabotki tsvetnykh fil'mov.
(Motion-picture photography--Equipment and supplies)
(Color photography--Printing processes)

POGORELOV, F.P.

25(2) PHASE I BOOK EXPLOITATION SOV/1636

Novye mashiny; obmen stary e novykh mashinakh, oborudovaniya na Khar'kovskikh predpriyatiyakh v period 1956-1958 gg. (New Machines; Collection of Articles on New Machines, Motors, and Apparatus Made in Khar'kov Plants From 1956 to 1958) /Khar'kov/ Khar'kovskoye oblastnoye izd-vo, 1958. 224 p. 4,000 copies printed.

Compilers: P.I. Zmaga, Scientific Eds.: V.A. Bulgakov (Chief Engineer, Khar'kov Electromechanical Plant), S.A. Yorob'yev (Candidate of Technical Sciences, Docent), L.A. Shubenko-Shubin (Chief Machine Designer, Khar'kov Turbine Plant, and Corresponding Member, Ukrainian SSR Academy of Sciences); Ed.: Ya.Ye. Donskoy; Tech. Ed.: K.G. Shevchenko.

PURPOSE: This collection of articles is to acquaint the reader with the latest developments and attainments of the Khar'kov machinery manufacturing industry during the 1956-58 period.

COVERAGE: The book, prepared in the form of a descriptive catalog, presents the latest information on machinery and equipment manufactured by Khar'kov plants from 1956-58. A detailed description is given of the following machines and equipment: steam turbines, tractors, self-propelled chassis, diesel engines, diesel locomotives, machine tools including unit metal-cutting machine tools, conveyors, road building machinery, electric power generators, electrical and electronic instruments. Numerous photographs of the above-listed machinery and equipment are included in the text. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Zmaga, P.I., Director of the Machinery Manufacturing Division of the Khar'kov Oblast' Committee of the Ukrainian Communist Party. On the Path to Further Technological Progress 5

Yakunin, A.I., Vice Chairman of the Sovarkhoz of the Khar'kov Economic Administrative Region. New Technology as a Powerful Lever for the Growth of Labor Productivity 13

Card 2/6

New Machines; Collection of Articles (Cont.) SOV/1636

Kovel', I.I., Chief Designer at the "Serp i molot" Plant. Standardized Diesel SKD 86

Stepunin, I.M., Director of the Khar'kov Machine-tool Manufacturing Plant. New Improved Machine Tools 98

Ryabko, Kh.G., Director of the Khar'kov Small Unit Machine-Tool Plant, and S.Ye. Shverdman, Assistant to the Chief Designer. Small Unit Machine Tools 107

Orlenin, N.G., Chief Engineer at the "Svetlanka" Plant. Mobile and Flexible Scraping Conveyor KSP-1 120

Trishenko, P.S., Director of the "Krasnyy Oktyabr'" Machinery Manufacturing Plant. Highly Productive Machines for the Construction Materials Industry 127

Pogorelov, F.P., Director of a Plant for Construction Machinery Equipment for the Construction Industry 135

Lagrinov, S.I., Director of the Plant for Road-building Machinery. Manufacture of Road-building Machinery in Khar'kov 145

Card 4/6

POGORELOV, G.; TROITSKIY, N.; IVANENKO, I.; VASIL'YEVA, V.; VIKHROV, P.

Old shortcomings in the new equipment. Okhr.truda i sots. strakh. no.12:29-30 D '59. (MIRA 13:4)

1. Tekhnicheskiye inspektora Moskovskogo oblastnogo soveta profsoyuzov.
(Moscow--Textile industry--Hygienic aspects)

VASIL'YEVA, V.; TROITSKIY, N.; POGORELOV, G.; IVANENKO, I.

Instruction on industrial hygiene. Okhr.truda i sots.strakh. 5 no.1:31-32 Ja '62. (MIRA 15:2)

1. Tekhnicheskiye inspektora Moskvskogo oblastnogo soveta profsoyuzov.

(Safety education, Industrial)

POGORELOV, G.; IVANENKO, I.; TROITSKIY, N.; VIKHROV, P.; VASIL'YEVA, V.

Discussing the draft of the Basic Principles of Labor Law of the U.S.S.R. and the Union Republics. Okhr.truda i sots.strakh. 3 no.3:33 Mr '60. (MIRA 13:7)

1. Tekhnicheskiye inspektora Moskovskogo oblastnogo soveta profsoyuzov.
(Labor laws and legislation)

KOZLOVA, Mariya Pavlovna; KUTANIN, A.F., retsenzent; POGORELOV, G.I., retsenzent; TRUTNEV, M.M., retsenzent; SOKOLOVA, V.Ye., red.

[Safety measures and labor protection in enterprises of the woolen industries] Tekhnika bezopasnosti i okhrana truda na predpriiatiiakh sherstianoi promyshlennosti. Moskva, Izd-vo "Legkaia industriia," 1964. 125 p.
(MIRA 17:7)

YAKOVLEV, M.F.; VASIL'YEVA, V.A.; VIKHROV, P.P.; IVANENKO, I.P.; POGORELOV, G.I.; TROITSKIY, N.L.

General inspection of the work organization level in factories. Tekst.prom. 20 no.6:51-53 Je '60. (MIRA 13:7)

1. Nachal'nik podotdela organizatsii truda Mosoblsovnarkhoza (for Yakovlev). 2. Tekhnicheskiye inspektora Moskovskogo otdeleniya soveta profsoyuzov pri obkome profsoyuza rabochikh tekstil'noy i legkoy promyshlennosti (for all except Yakovlev).

(Moscow Province—Textile factories)

POGORELOV, G.K.

MAKSIMOVA, O.P., kand.tekhn.nauk; NIKONOROVA, A.I.; POGORELOV, G.K.

Effect of deformation on the rate of isothermal martensite transformation in iron-nickel-manganese alloys. Probl. metalloved. i fiz. met. no.4:144-164 '55. (MIRA 11:4)
(Deformations (Mechanics)
(Iron-nickel-manganese alloys--Metallography)

POGORELOV, G.K.

MAKSIMOVA, O.P., kand.tekhn.nauk; NIKONOROVA, A.I.; POGORELOV, G.K.

Effect of hot plastic deformation on the kinetics of martensite transformation in high nickel alloy steels. Probl. metalloved. i fiz. met. no.4:198-204 '55. (MIRA 11:4)
(Nickel steel--Metallography) (Deformations (Mechanics)
(Martensite)

LEVITINOV, S.D., dotsent; POLYAKOV, G.V., inzh.; ASTRAKHANTSEV, N.Ya., inzh.; POGORELOV, G.M., inzh.

Recuperative braking on commercial electric locomotives in open-pit mines. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:122-135 '63. (MIRA 16:7)

1. Chelyabinskiy politekhnicheskiy institut. Rekomendovana kafedroy elektroprivoda i avtomatizatsii promyshlennykh ustanovok.
(Mine railroads--Brakes)

84-58-6-16/59

AUTHOR: Pogorelov, I.

TITLE: Training of Young Pilots (Obucheniye molodykh pilotov)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 6, p 13 (USSR)

ABSTRACT: The article deals with the practice of introduction training of young pilots in an unidentified operational unit of the Aeroflot. Discipline is stressed as the basic factor in maintaining safe performance. A prolongation of the introduction training is advocated, as well as a more gradual assignment of difficult flights in the initial period of service.

1. Pilots--Training--USSR

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POGORELOV, I., mayor

Work practice of the unit's party organization. Voen. vest. 39 no.7:36-40 Jl '59. (MIRA 12:10)
(Russia--Army--Education, Non military)

POGORELOV, I., podpolkovnik

Obstacle course simulating a town. Voen.vest. 39 no.8:87 Ag '60.
(MIRA 14:2)
(Obstacles (Military science))

POGORELOV, I. (Dnepropetrovsk)

Rectifier for the "Rodina-52" battery operated radio receiver. Radio no.1:55 Ja '61. (MIRA 14:9)
(Electric current rectifiers)
(Radio--Receivers and reception)

ZEMSKOV, P.I., dotsent; POGORELOV, I.D.; YAKUSHINA, Ye.N.

Soldering aluminum parts. Mashinostroitel' no.7:38-39 Jl '62.
(MIRA 15:7)

(Aluminum—Welding)

ZEMSKOV, P.I.; POGORELOV, I.D.; KHARCHENKO, Ye.N.; YAKUSHINA, Ye.N.

Devices for measuring the hardness of shaped parts. Stan. i instr. 36 no.4:37-38 Ap '65. (MIRA 18:5)

ZEMSKOV, P. I.; POGORELOV, I. D.

Investigating the wear of piston rings made of high-strength cast iron in motor-vehicle engines. Avt. prom. 28 no.9:30-33 S '62. (MIRA 15:10)

1. Khar'kovskiy zavod "Serp i molot".

(Piston rings—Testing)

POGORELOV, I.D., inzh.; ZEMSKOV, P.I., kand.tekhn.nauk

Cold electric-arc welding of cast iron. Izv.vys.ucheb. zav.; mashinostr. no.2:146-152 '59. (MIRA 13:3)

1. Khar'kovskiy institut inzhenerov kommunal'nogo stroitel'stva i Khar'kovskiy zavod "Serp i molot".
(Electric welding)

ZEMSKOV, P.I., inzh.; POGORELOV, I.D., inzh.; YAKUSHINA, Ye.N., inzh.; KHARCHENKO, Ye.N., inzh.

Welding and soldering during the repair of AL10V aluminum alloy parts. Svar. proizv. no.8:40-41 Ag '63. (MIRA 17:1)

1. Khar'kovskiy zavod "Serp i molot".

ZEMSKOV, P.I., dotsent, kand.tekhn.nauk; POGORELOV, I.D., inzh.

Experience in welding and soldering aluminum parts at the "Serp i Molot" Plant in Kharkov. Izv.vys.ucheb.zav.; mashinostr. no.7: 89-95 '59. (MIRA 13:6)

1. Khar'kovskiy institut inzhenerov kommunal'nogo stroitel'stva.
(Electric welding) (Solder and soldering)

S/145/60/000/003/008/010
D221/D301

AUTHORS: Zemskov, P.I., Candidate of Technical Sciences, Docent and Pogorelov, I.D., Engineer

TITLE: Comparative data on antifrictional properties of certain plastics

PERIODICAL: Izvestiya vysshikh uchbenykh zavedeniy. Mashinostroyeniye, no. 3, 1960, 77 - 81

TEXT: The Central Factory Laboratory at the "Serp i molot" plant in Khar'kov investigated antifrictional properties of plastics. Specimen bushes from normal caprone, and also caprone with 3-5 % of an graphite admixture as well as tekstolite, voloknite and fenoplast were tested. The inserts worked with a steel shaft, ст-45 (st-45), R_c - 60 and H_b - 170, and a high strength cast iron, R_c-40, H_b - 170. Bronze, babbitt and cast iron bushes were tested for comparison. The purpose was the study of the effect of speed, load, lubricant, material and hardness of shaft on the coefficient of friction. Tests were carried out on an МИ (MI) machine. The wear on

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bushes was measured by analytical balance. The surface of rollers which imitated the shaft was ground. Hardened and untreated rollers were employed. The lubricant was formed by Industrial'noye (Industrial) 20, AK-10 and ДП-14 (DP-14) oils and пересолидол АШ (perssolidol ASh) grease. The minimum wear was exhibited by caprone, especially when having 3 - 5 % graphite additive, Q = 0.5 μ and Q = = 0.1 - 0.2 μ respectively. The wear for other plastics was 4 - 5 times greater. This amounted to 2.5 μ for bronze and babbitt bushes and 10 μ in the case of cast iron insert. The caprone with graphite indicated best antifrictional properties, but the minimum friction torque is shown by babbitt. This torque has a marked tendency to rise at the beginning of running-in of caprone and then falls again The friction coefficient of caprone depends on load and speed, as indicated by graphs. It is highest at low loads. The wear of caprone inserts increases with the hardness of shaft. Cast iron shaft exhibits a smaller friction which is apparently due to greater porosity of former and also on account of lubricating properties of its graphite. The friction in caprone is lower when AK-10 oil is used than when lubricating with "Industrial 20". The minimum friction and wear take place during work of caprone with grease. The

S/145/60/000/003/008/010
D221/D301

Comparative data on antifrictional ...

authors conclude that caprone is the most suitable for bushes. In the case of inadequate lubrication, caprone with 3 - 5 % of graphite addition is recommended. There are 5 figures.

ASSOCIATION: Khar'kovskiy institut inzhenerov komunal'nogo stroitel'stva (Khar'kov Institute of Engineers of Civil Construction)

SUBMITTED: July 17, 1959

Card 3/3

ZEMSKOV, P.I., kand.tekhn.nauk, dotsent; POGORELOV, I.D., inzh.

Investigating high-grade cast iron as material for piston rings of motor-vehicle engines. Izv.vys.ucheb.zav.; mashinostr. no.4: 138-147 '62. (MIRA 15:7)

1. Khar'kovskiy institut kommunal'nogo khozyaystva.
(Cast iron—Testing)
(Piston rings)

ZEMSKOV, P.I.; POGORELOV, I.D.

Device for testing the hardness of shafts. Mashinostroitel' no.5:37 My '62. (MIRA 15:5)
(Rockwell test)

ZEMSKOV, P.I., dotsent, kand.tekhn.nauk; POGORELOV, I.D., inzh.

Making distributing shafts of gray iron. Izv. vys. ucheb. zav.; mashinostr. no. 10:106-114 '60. (MIRA 14:1)

1. Khar'kovskiy kommunal'nyy institut.
(Tractors--Engines)

POGORELOV, I.D., inzh.; ZEMSKOV, P.I., inzh.

Rockwell hardness testing press for crankshaft journals.
Metalloved. i term. obr. met. no.7:57 Jl '61. (MIRA 14:6)

1. Khar'kovskiy zavod "Serp i molot."
(Cranks and crankshafts--Testing)
(Hardness--Testing)

ZEMSKOV, P.I., kand.tekhn.nauk, dotsent; POGORELOV, I.D., inzh.; BALYUK, B.K., inzh.

Investigating the performance of engine bimetallic bushings made with ASM alloy. Izv.vys.ucheb.zav.; mashinostr. no.11:79-83 '61. (MIRA 14:12)

1. Khar'kovskiy institut inzhenerov kommunal'nogo stroitel'stva. (Aluminum alloys--Testing)

POGORELOV, I.M.

And our new objectives shall also be fulfilled. Avtom. telem. i sviaz' 8 no. 3:26-28 Mr '64. (MIRA 17:5)

1. Nachal'nik Pologskoy distantsii signalizatsii i svyazi Pridneprovskoy dorogi.

POGORELOV, I.Ye.

[The lecture propagandizing agricultural and zootechnical knowledge; work practices of a lecture group in Karlovka District, Poltava Province] Lektsiina propaganda agrozootekhnichnykh znan'; dosvid roboty lektros'koi grupy Karlivs'kogo raiony, Poltavs'koi oblasti. Kyiv, Vyd-vo Akademii nauk Ukr. RSR, 1951 26 p.
(MLRA 10:5)

(Karlovka District--Agricultural extension work)

DYDDYURA, A.G., starshiy inzhener-konstruktor; POGORELOV, I.Ye., inzhener-konstruktor.

Fast PR-10 hammer drills. Gor. zhur. no.4:6-7 Ap '57. (MLRA 10:5)
(Rock drills)

POGORELOV, I.YE.

DYADYUHA, A.G., inzh.-konstruktor; POGORELOV, I.Ye., inzh.-konstruktor.

Fast PT-29m telescopic hammer drills. Gor. zhur. no.2:52-53 F '58.
(MIRA 11:3)

1. Zavod "Kommunist."

(Rock drills)

POGORELOV, M.S. Kandidat ekonomichnikh nauk.

Certain problems in improving the economics of state farms.
Nauk.zap.Kiev.un. 15 no.9:167-177 '56. (MLRA 10:7)
(State farms)

POGORELOV, M.Ye.

Obtaining of high-titer precipitating sera. Zhur. mikrobiol., epid. i immun. 42 no.7:139-144 Jl '65. (MIRA 18:11)

1. II Moskovskiy meditsinskiy institut imeni N.I. Pirogova.

LOMIYA, Ya.; POGORELOV, N.; MILOVIDOVA, N.D., redaktor; TISHEVSKIY, I.I., tekhnicheskiy redaktor

[Good yields of tea leaves] Vysokie urozhai chainogo lista. [Moskva, Izd-vo Ministerstva sel'skogo khoziaistva SSSR, 1955] folder (4 p.)
(Tea)
(MLRA 10:1)

POGORELOV, N.

Using swine houses built of precast reinforced concrete. Sel'. stroi. 11 no.4:13 '56 [i.e. '57]. (MLRA 10:6)

1. Predsedatel' kolkhoza imeni V.I. Lenina, Ozinskogo rayona, Saratovskoy oblasti.
(Swine houses and equipment)
(Precast concrete construction)

L 40749-65 EWT(l)/EWA(j)/EWA(b)=2 JK

ACCESSION NR: AP5012394 UR/0016/64/000/012/0094/0098

AUTHOR: Pogorelov, N. A.

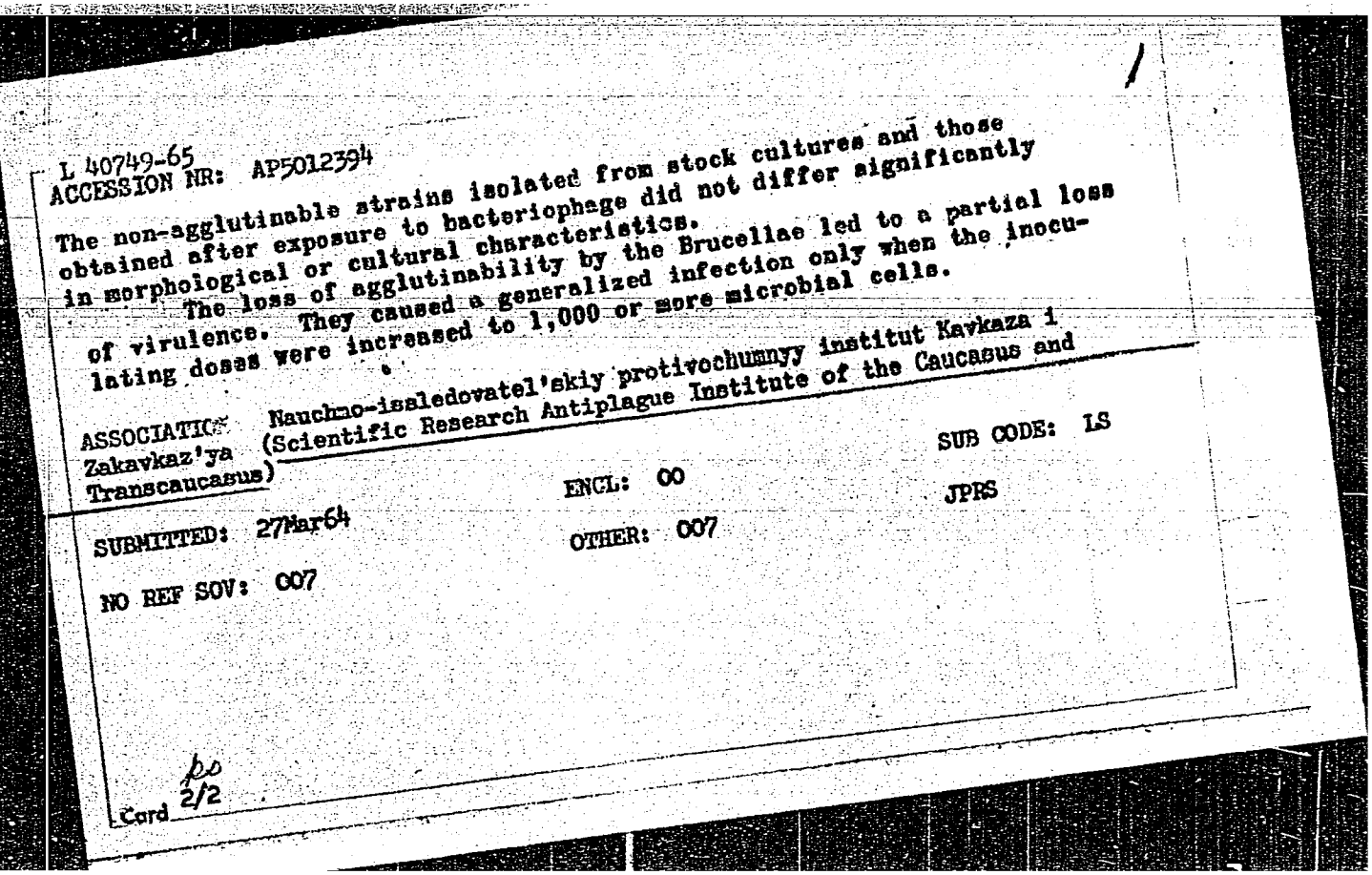
TITLE: Variability of Brucella, I. Preparation and description of non-agglutinable Brucella cultures

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 12, 1964, 94-98

TOPIC TAGS: brucellosis, immunology, serum, microbiology

ABSTRACT: The aim of the author was to isolate from stock cultures Brucella strains that could not be agglutinated by the usual antibrucella sera, and to obtain similar variants by subjecting the cultures to factors that induce variability. About 1½% of the 203 cultures studied proved to be non-agglutinable. Prolonged cultivation of three species of Brucellae on media with immune sera produced mucous forms of colonies that retained the capacity for agglutination with specific O serum and regained their original form after 3-4 transfers to ordinary culture media. Similarly, prolonged cultivation of Brucella cultures on yolk media (38 transfers every 4-5 days) likewise failed to cause a loss of agglutinability. Non-agglutinable variants were obtained on the 5th day of cultivation on liquid culture media to which Brucella bacteriophage was added.

Card 1/2



L 40749-65
ACCESSION NR: AP5012394

The non-agglutinable strains isolated from stock cultures and those obtained after exposure to bacteriophage did not differ significantly in morphological or cultural characteristics.

The loss of agglutinability by the Brucellae led to a partial loss of virulence. They caused a generalized infection only when the inoculating doses were increased to 1,000 or more microbial cells.

ASSOCIATION: Nauchno-issledovatel'skiy protivochumnyy institut Kavkaza i Zakavkaz'ya (Scientific Research Antiplague Institute of the Caucasus and Transcaucasus)

SUBMITTED: 27Mar64 ENCL: 00 SUB CODE: LS

NO REF SOV: 007 OTHER: 007 JPRS

Card 2/2

ACC NR: AP6032246 SOURCE CODE: UR/0016/66/000/009/0070/0074

AUTHOR: Taran, I. F.; Pogorelov, N. A.; Kulikova, G. G.; Kutsemakina, A. Z.; Rudnev, M. M.; Nelyapin, N. M.; Rudneva, V. A.; Suvorova, A. Ye.

ORG: Stavropol' branch, "Microbe" Antiplague Scientific Research Institute (Stavropol'skiy filial, Nauchno-issledovatel'skogo protivochumnogo instituta "Mikrob")

TITLE: Brucellosis cultures isolated from rodents and their ectoparasites

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 9, 1966, 70-74

TOPIC TAGS: [illegible], epidemiology, disease vector, rodent, parasite, animal disease, tularemia, brucellosis

ABSTRACT: Twenty-eight *brucella* cultures were isolated from wild rodents, their ectoparasites and from domestic swine during a study of the effects of tularemia vaccination and infection upon *brucella* penetration. Bacteriological as well as phage typing methods were used in identifying the individual strains. There was no difference in cultures isolated from wild and domestic animals. Prolonged passaging of *brucella* cultures in mice vaccinated with tularemia vaccine and infected with virulent tularemia strains

Card 1/2 UDC: 576.851.42

ACC NR: AP6032246

did not alter their cultural or biochemical properties. Transmission of *brucella* from wild rodents to the domestic hogs used in this study was established. [WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: 29Jan66/ ORIG REF: 004/

Card 2/2

ACC NR: AP6032246 SOURCE CODE: UR/0016/66/000/009/0070/0074

AUTHOR: Taran, I. F.; Pogorelov, N. A.; Kulikova, G. G.; Kutsemakina, A. Z.; Rudnev, M. M.; Nelyapin, N. M.; Rudneva, V. A.; Suvorova, A. Ye.

ORG: Stavropol' branch, "Microbe" Antiplague Scientific Research Institute (Stavropol'skiy filial, Nauchno-issledovatel'skogo protivochumnogo instituta "Mikrob")

TITLE: Brucellosis cultures isolated from rodents and their ectoparasites

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 9, 1966, 70-74

TOPIC TAGS: ~~medicine, public health research~~, epidemiology, disease vector, rodent, parasite, animal disease, tularemia, brucellosis

ABSTRACT: Twenty-eight *brucella* cultures were isolated from wild rodents, their ectoparasites and from domestic swine during a study of the effects of tularemia vaccination and infection upon *brucella* penetration. Bacteriological as well as phage typing methods were used in identifying the individual strains. There was no difference in cultures isolated from wild and domestic animals. Prolonged passaging of *brucella* cultures in mice vaccinated with tularemia vaccine and infected with virulent tularemia strains

Card 1/2 UDC: 576.851.42

ACC NR: AP6032246

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SUB CODE: 06/ SUBM DATE: 29Jan66/ ORIG REF: 004/

Card 2/2

POGORELOV, N.S.

[Tasks of the sixth five-year plan in socialist agriculture; a lecture] Zadachi shestogo pyatiletnego plana v oblasti sotsialisticheskogo sel'skogo khozyaystva; lektsiya. Kiyev, Izd-vo Kievskogo gosudarstvennogo universiteta, 1956. 30 p. (MIRA 11:3)
(Agricultural policy)

CHUKHNO, A.A.; POGORELOV, M.S.[Pogorielov, M.S.] kand.ekon.nauk, red.

[Wages under socialism; a lecture] Zarobitna plata pry sotsializmi; loktsiia, [Kyiv] Vyd-vo Kyivs'koho derzh.univ.im. T.H.Shevchenka, 1957. 28 p. (MIRA 11:3)
(Wages)

POGORELOV, Nikolay Semenovich, kand.ekon.nauk; PANCHENKO, N.F., dotsent, otv.red.; GERMAN, M.A., red.; KHOKHANOVSKAYA, T.I., tekhred.

[State farms as the highest form of agricultural organization under socialism] Sovkhozy kak vysshaia forma organizatsii sel'skogo khoziaistva pri sotsializme. Izd-vo Kievskogo gos. univ., 1958. 133 p. (MIRA 12:4)
(State farms)

USSR/Cultivated Plants - Subtropical. Tropical. M.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44356

Author : Nadaraya, G.B., Pogorelov, N.V.

Inst : All-Union Institute for Tea and Subtropical Cultures.

Title : On the Problem of the Creeping Culture of the Lemon and of the Orange.

Orig Pub : Byul. Vses. n.-i. in-ta chaya i subtrop. kul'tur, 1957, No 1, 108-114, 109-115

Abstract : The known methods of protecting lemons and oranges grown in bush form on the Black Sea Coastal zone of Caucasus (hilling, covering, warming) do not grarantee these varieties from the serious winter damage. The Sukhum affiliate of the Institute recommends growing lemons and oranges in the ground-cover form with the use of group coverings with three-layer gauze. This method secures

Card 1/2

NADARAYA, G.B., doktor biologicheskikh nauk; POGORELOV, N.V., kand.sel'skokhozyaystvennykh nauk

Spreading culture of lemon and orange. Biul. VNIICHiSK no.1:109-115 '57. (MIRA 15:5)
(Lemon) (Orange)

POGORELOV, O. [Pohorielov, O.], deystvitel'nyy chlen AN UkrSSR

One more application of geometry. Nauka i zhyttia 11 no.3:14 Mr '62. (MIRA 15:8)

1. Chlen-korrespondent AN SSSR, zaveduyushchiy otdelom geometrii Fiziko-tekhnicheskogo instituta nizkikh temperatur AN UkrSSR.
(Mechanics, Applied) (Envelopes (Geometry))

ZEMSKOV, P.I.; POGORELOV, P.D.

Devices for measuring the hardness of control rod and crankshaft in a Rockwell press. Zav.lab. 28 no.3:366-367 '62. (MIRA 15:4)

1. Khar'kovskiy zavod "Serp i molot".
(Rockwell test)

ZEMSKOV, P.I., kand.tekhn.nauk, dotsent; POGORELOV, P.D., inzh.

Device for measuring the hardness of a crankshaft. Izv.vys.ucheb.-zav.; mashinostr. no.7:177 '61. (MIRA 14:9)

1. Khar'kovskiy institut inzhenerov kommunal'nogo stroitel'stva.
(Hardness--Measurement)

Pogorelov, P.F.

BARSUKOV, N.I., kand.sel'skokhozyaystvennykh nauk; KIZYURIN, A.D., doktor sel'skokhozyaystvennykh nauk; BORINEVICH, V.A., kand.sel'skokhozyayr stvennykh nauk; BORMUSOVA, S.N., agronom; VERMENICHEVA, M.D., kand. sel'skokhozyaystvennykh nauk; GESHELE, E.E., doktor biol. nauk; GOROKHOV, G.I., kand.sel'skokhozyaystvennykh nauk; GUBKIN, S.M., kand. veterinarnykh nauk; YELYKOVA, L.I., kand.sel'skokhozyaystvennykh nauk; KOCHKINA, V.A., agronom; LAMBIN, A.Z., doktor biol.nauk; KOTT, S.V., doktor biol. nauk; LEBEDEVA, Ye.M., agronom; MALAKHOVSKIY, A.Ya., doktor sel'skokhozyaystvennykh nauk; MAYBORODA, N.M., kand. sel'skokhozyaystvennykh nauk; MAYDANYUK, A.E., zootekhnik; OVSYANNIKOV, G.Ye., kand.sel'skokhozyaystvennykh nauk; PETROV, F.A., kand.biol.nauk; POGORELOV, P.F., agronom; POLKOSHNIKOV, M.G., dotsent; REINARD, G.K., kand. sel'skokhozyaystvennykh nauk; RUCHKIN, V.N., prof.; SADYRIN, M.M., kand.sel'skokhozyaystvennykh nauk; TOBOL'SKIY, V.YA., vetvrach; TYAZHEL'NIKOV, S.D., kand.sel'skokhozyaystvennykh nauk; UKHIN, I.I., kand.sel'skokhozyaystvennykh nauk; FEDOROV, G.V., kand.sel'skokhozyaystvennykh nauk; CHIRKOV, D.I., zootekhnik; TSINGOVATOV, V.A., prof.; SHVETSOVA, A.N., kand.sel'skokhozyaystvennykh nauk; SHEVLYAGIN, A.I., kand.sel'skokhozyaystvennykh nauk; SEMENOVSKIY, A.A., red.; GOLUBINSKAYA, Ye.S., red.; NECHAYEVA, Ye.G., red.; PERESYPKINA, Z.D., tekhnicheskiy red.

[Siberian agronomist's reference manual] Spravochnaia kniga agronoma Sibiri. Moskva, Gos. izd-vo sel'khoz. lit-ry, Vol.2. 1957. 839 p. (MIRA 11:3)
(Siberia--Agriculture)

POGORELOV, P.F.

COUNTRY : USSR
CATEGORY : Cultivated Plants. Fruits. Berries. Nuts. Tea. M
ABS. JOUR. : RZhBiol., No. 4, 1959, No. 15794
AUTHOR : Pogorelov, P.F.
INST. : Siberian Sci.Res.Inst.of Agriculture
TITLE : Creeping Bush Form of Semi-cultivated Fruit Trees.
ORIG. PUB. : V sb.: Sbornik [illegible] plodovyk Omskoy obl., Barnaul, 1957, 106-107
ABSTRACT : According to the observations of the Siberian scientific research institute of agriculture, in the conditions of the Omskaya oblast, the trunk as well as the skeletal branches of a number of semi-cultivated sorts, formed in the open growing form with 30 to 40 cm trunks are often impaired by frosts and burns. A trial of the creeping bush form suggested by V.P. Tsvetkov-Ikov yielded good results.

Card: 1/1

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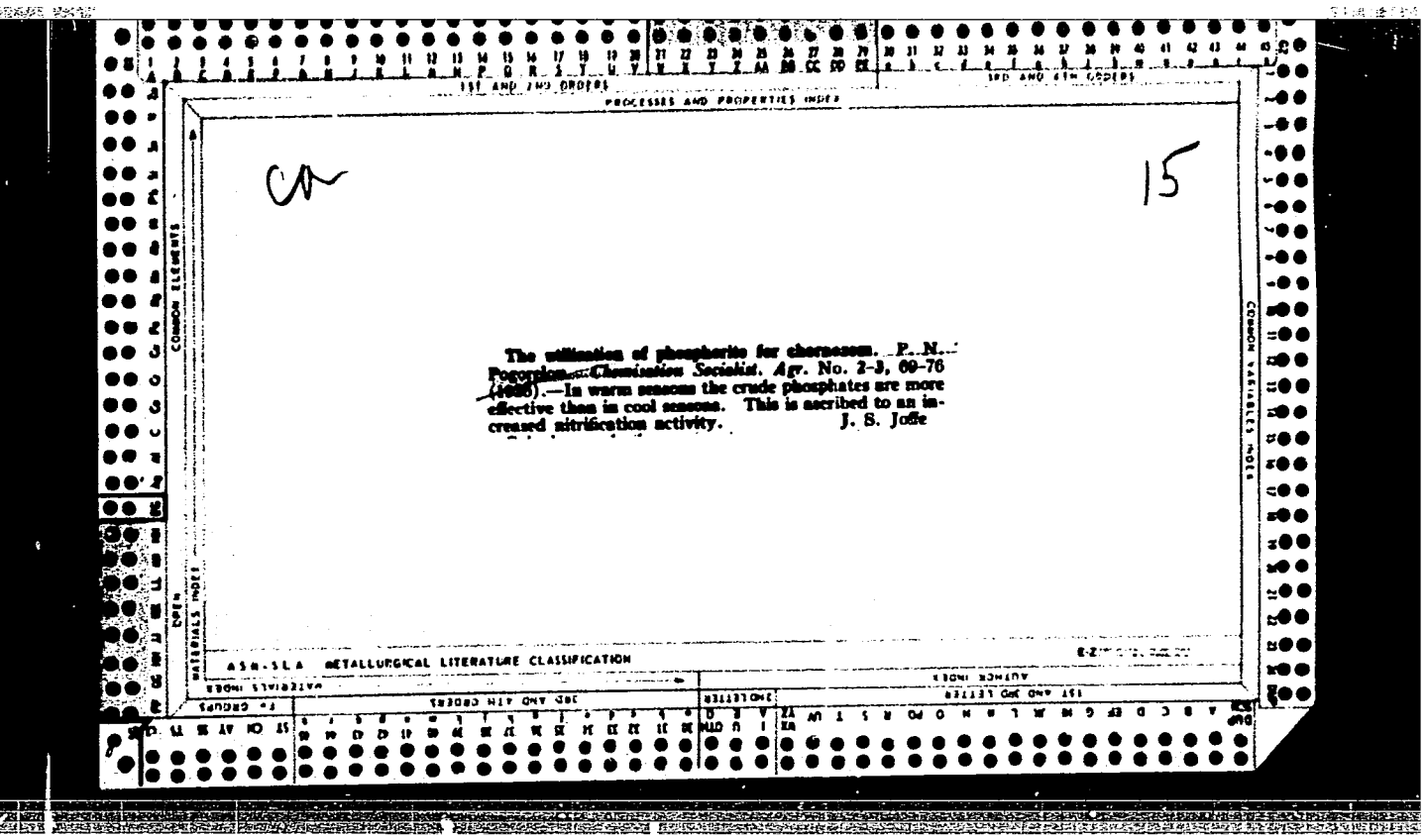

15

The utilization of phosphorite for chernozem. P. N. Pogoplon. *Chemization Socialist. Agr.* No. 2-3, 69-76 (1936).—In warm seasons the crude phosphates are more effective than in cool seasons. This is ascribed to an increased nitrification activity. J. S. Joffe

AKAMSIN, G.; POGORELOV, V.

First All-Russian flour milling exhibition. Muk.-elev. prom. 30 no.3:31 Mr '64. (MIRA 17:4)

1. Mel'nichnyy kombinat, Kaluga.

POGORELOV, V. A.

"Quasi Geodesics on a Convex Surface." Sub 5 Mar 47, Moscow Order of Lenin State U imeni M. V. Lomonosov

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

POGORELOV, V. A. Cand. Physicomath. Sci.

Dissertation: "Quasi-Geodesics on a Convex Surface". Moscow Order of Lenin U. imeni M. V. Lomonosov, 5 Mar. 1947.

SO: Vechernyaya Moskva, Mar. 1947 (Project #17836)

L 26500-66 EWP(m)/EPF(n)-2/EWA(h)/EWT(1)/EWT(m)/EWA(d) WW/JD/JG

ACC NR: AP6011499 SOURCE CODE: UR/0414/65/000/004/0003/0009

AUTHOR: Dremin, A. N. (Moscow); Pershin, S. V. (Moscow); Pogorelov, V. F. (Moscow)

ORG: none

TITLE: Structure of shock waves in KCl and KBr under dynamic compression to 200,000 atm.

SOURCE: Fizika goreniya i vzryva, no. 4, 1965, 3-9

TOPIC TAGS: potassium chloride, potassium bromide, shock wave structure, compression shock wave, shock wave velocity, phase transition

ABSTRACT: To compare the dynamic compressibility of KCl and KBr with the static compressibility and to obtain additional data on the kinetics of the phase transformation under shock compression, the authors measured the shock adiabat of the substances by an electromagnetic method for measuring the mass velocity of the material behind the front of the shock wave, developed by Ye. K. Zavoyskiy in 1948 (V. M. Zaytsev et al., Dokl. AN SSSR, 1960, v. 132, 1339). In this method the velocity is determined by the voltage induced in a thin aluminum foil moving with the substance and crossing flux lines of an external magnetic field. Most experiments were carried out at pressures of 37.5×10^9 bar in the case of KCl and 45.0×10^9 bar in the case of KBr. The procedure for plotting the velocity diagrams is briefly described. The shock wave velocity was found to be 3.20 ± 0.02 km/sec for KCl and 2.79 ± 0.02 km/sec for KBr. The corresponding mass velocities

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UDC: 532.593

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ACC NR: AP6011499

0

0.31 ± 0.01 for both substances. The results show that at the point of polymorphic transformation the compressibility parameters obtained under static and dynamic conditions are nearly the same, indicating that the transformation does not depend on the length of time during which the required pressure is applied. It is deduced from the slope of the second shock wave that the phase transformation occurs very rapidly, within not more than 0.2 μsec at pressures on the order of 40×10^9 bar. Orig. art. has: 8 figures, 1 formula, and 2 tables.

SUB CODE: 20/ SUBM DATE: 24Feb65/ ORIG REF: 005/ OTH REF: 001

Card 2/2 dc

FINOGENOV, V.I.; LOBAZNOV, P.G.; POGORELOV, V.G.

Automatic control ov mechanisms in the tail part of the 850 pipe-rolling mill. Sbor. rats. predl. vnedr. v proizv. no.2:27-28 '61. (MIRA 14:7)

1. Azerbaydzhanskiy truboprokatnyy zavod.
(Pipe mills) (Automatic control)

AUTHOR: Pogorelov, V.I. SOV/49-58-8-15/17

TITLE: Radio Echoes from the Aurora (Radiolokatsionnyye otrazheniya ot polyarnykh siyaniy)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 8, pp 1048 - 1051 (USSR)

ABSTRACT: Radio investigations of the aurora were carried out at Roshchino ($\varphi = 60^{\circ}12'$, $\lambda = 29^{\circ}34'$ E, $\Phi = 56^{\circ}35'$, $\Lambda = 116^{\circ}47'$ E) as a part of the IGY programme. Observations were made round-the-clock on certain days and during special world intervals at every 00, 15, 30 and 45 minutes/hour of local time. Less systematic observations were made on other days. The maximum observational range of the apparatus was 1 200 km. Two types of signals were observed during aurora (Ref 1): a) stationary or very slowly moving; b) rapidly moving both with increase and decrease of distance. Signals of type b) ran along the screen once or several times in either direction without any noticeable change in form. Such displacement corresponded to apparent velocities up to 5 000 km sec^{-1}. They seemed to be due to the reception of radiations from another radiolocation

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apparatus working at the same frequency but with a different number of impulses per second.
The author goes on to describe the results obtained. The distribution of the number n of observed reflections of types a) and b) is shown in Figure 1 for hourly intervals of local time. In the construction of these diagrams, only days with round-the-clock observation were used (one reflection denotes a reflection of any intensity observed during one rotation of the antenna in a horizontal plane). Analysis showed that the time of maximum reflection numbers and of maximum intensities coincided. Weak signals, however, only appeared during times of the maxima in Figure 1. Generally speaking, the variation of intensity with time was the same for both a) and b).
Figure 2 shows the distribution of signals a) and b) in azimuth (top of the figure is North). The observed data are averaged over 10° intervals. No real difference was noticed in the azimuths of signals with different intensities, although weak signals of type b) had a maximum only at 20°. Figure 2 indicates that the maximum number of reflections of all types occurred at azimuths of about

0° and 20° (the minimum at 10° may well be accidental). Signals of type b) often seemed either similar, or mirror images, of type a) signals, The coincidence of their azimuths indicates that both types of reflection are produced in the same regions of increased electronic concentration. However, in many cases, the a) and b) signals are not observed simultaneously or, if simultaneous, with different azimuths.

Next, a diagram was constructed of the areal distribution of reflections as a function of distance D and azimuth E . Figure 3 shows the resulting contour lines. The dotted line represents points situated at a height of 100 km on one of the magnetic parallels. It follows that the area of reflection is not distributed in a narrow arc along the parallel, although it is concentrated around it. (The arc-shaped distribution coincides with a magnetic, but not a geomagnetic, parallel) This seems to be a genuine representation not dependent, for example, on height dispersion of the reflecting zones. The analogous diagram given by Kaiser (Ref 2) from observations in Refs 3 and 4 is only obeyed statistically - specific observations

can deviate considerably from the arc-shaped outline. The determination of the co-ordinates of reflecting regions using one radiolocation apparatus is only possible with type a) signals. When the azimuth and angle of inclination are determined satisfactorily, it is difficult to determine the distance with sufficient accuracy to derive the heights involved. It is more satisfactory to use several radiolocation apparati simultaneously. Thus, accepting Chapman's hypothesis (Ref 4) that the reflecting elements are distributed parallel to the magnetic field in places where the magnetic lines of force are perpendicular to the direction of the radiolocator, it is possible (with several crude assumptions) to calculate the angle above the horizon which would be observed at Roshchino. Figure 4 shows the distribution of the number of reflections, n , as a function of the heights, H , of the reflecting regions (obtained from material collected at Roshchino, June-October, 1957). The maximum number of reflections occurs at a height of 120 km (i.e. at about the most intense region of the aurora). Using the geomagnetic field, a different distribution is obtained, which indicates that,

in the auroral zone, the field differs considerably from the geomagnetic. It follows from Figure 4 that radio reflections occur from regions lower than 100 km which seems unlikely owing to the small electron concentration there. This, also, indicates that the field at these heights is different from that at the surface of the Earth. Inaccuracy in the determination of height is also due, perhaps, to refraction of radio waves in inhomogeneities in the ionosphere. It should be noticed that the hypothesis of similarity between the mechanisms of radio-reflection from meteor trails and from aurora has not yet been fully worked out (Refs 5 and 6).

The author thanks V.I. Krasovskiy for his advice.

There are 4 figures, and 6 references, 1 of which is Soviet and 5 English.

Radio Echoes from the Aurora SOV/49-58-8-15/17

ASSOCIATION: Akademiya nauk SSSR Institut fiziki atmosfery Roshchinskaya stantsiya (Ac.Sc.USSR Institute of Atmospheric Physics, Roshchino station)

SUBMITTED: February 13, 1958

1. Aurorae--Radiographic analysis

Card 6/6

AUTHORS: Martvel', F.E. and Pogorelov, V.I. SOV/49-58-8-16/17

TITLE: On the Connection Between the Auroral Luminosities and Their Radio Reflections (O svyazi svetimosti polyarnykh siyaniy s radiolokatsionnymi otrazheniyami ot nikh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 8, pp 1052 - 1053 + 1 plate (USSR)

ABSTRACT: Radio observations were carried out at Roshchino ($\varphi = 60^{\circ}12'$, $\lambda = 29^{\circ}34'$ E; $\Phi = 56^{\circ}35'$, $\Lambda = 116^{\circ}47'$ E) simultaneously with photographic observations on the aurora (using an automatic, 180° Stoffregen camera). The 72 Mc radiolocator at Roshchino and the initial results obtained with it are described in Ref 1, whilst the Stoffregen camera is described in Ref 2. After the end of the polar night in August, 1957, the camera was used on every moonless night during the regular world days and special world intervals. Owing to the cloudy weather generally prevailing, it was difficult to determine the brightness and type of aurora from the photographs (even for a 20-sec exposure). Hence, to avoid error, only results from nights which were both moonless and cloudless were used. The photographs were oriented

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On the Connection Between the Auroral Luminosities and Their Radio Reflections

on the geomagnetic pole with East on the right. In figures 1 and 2, the light spots mark each 10° and the arrows represent the azimuth of maximum radio reflection. It is natural to assume that reflection of the 4-metre waves used takes place in the first instance from inhomogeneities in the ionosphere which show maximum electron concentration during aurorae. These are known to be in the sporadic E layer - situated at about the same level as the normal E layer, viz. ~110 km (Ref 3). Using this height and the observed angle of inclination of the radio signals, it should be possible to decide at which point in the sky radio reflection occurs. Figures 1 and 2 show photographs taken on November 26, 1957 and September 22, 1957. Narrow areas have been drawn on them to show where shortwave radio reflections might originate under these conditions. It can be seen that the area occupied by aurora is much greater than the reflection area and the brightness of the latter does not coincide with the maximum brightness of the former. Dispersion of the heights of reflection even in the limits of 100 to 200 km could not

On the Connection Between the Auroral Luminosities and Their Radio Reflections

lead to a substantial change in zenith distance or vertical angular width, since only distances exceeding 500 km were observed at Roshchino (Ref 1).
The table gives a comparison of the aurorae and their radio reflections. The heights of the reflecting zones are calculated on the assumption that reflections are produced in directions perpendicular to the mgnetic lines of force. The aurorae shown in the table covered almost the entire Northern horizon in azimuth and extended as far as and beyond the zenith. The spectral characteristics of the aurorae were normal, although the emission was not observed owing to more intense neighbouring emission.
The material obtained at Roshchino leads to the following points: 1) generally speaking, the most intense radio reflections seemed to coincide with clearly defined auroral streamer displays; 2) reflections of large amplitude corresponded to the brighter aurorae - when aurorae were absent, no radio reflections were observed and only few reflections were recorded with weak aurorae; 3) there is a small dispersion (5-10°) between the azimuths of the most

intense parts of the aurorae and the azimuths of the most intense radio reflections. This does not, however, exceed the limits of error and can, in any case, be explained by radiowave refraction in an ionised medium; 4) the dimensions of the radio reflection zones are small compared with the area of sky covered by aurora. The zones coincided approximately with the areas which obeyed Chapman's condition (Ref 4) (i.e. the direction of reflection is perpendicular to the magnetic lines of force). There are 4 references, 2 of which are Soviet (1 translated from English) and 2 English.

SOV/49-58-8-16/17

On the Connection between the Auroral Luminosities and Their Radio Reflections

ASSOCIATION: Akademiya nauk SSSR Institut fiziki atmosfery Roshchinskaya stantsiya (Institute of Atmospheric Physics, Roshchino Station)

SUBMITTED: February 13, 1958

1. Aurorae--Luminescence

Card 5/5

89762

S/169/61/000/002/015/039
A005/A001

3,1810
9,9000 (also 1036)

Translation from: Referativnyy zhurnal, Geofizika, 1961, No. 2, pp. 31-32, # 2G237

AUTHOR: Pogorelov, V. I.

TITLE: The Connection of Radar Reflections From Aurora With Disturbances of the Earth's Magnetic Field

PERIODICAL: V sb.: "Spektr., elektrofotometr i radiolokats. issled. polyarn. siyaniy i svecheniya nochnogo neba". No. 2-3. Moscow, AN SSSR, 1960, pp. 28-31 (English summary)

TEXT: Results of the comparison of the data of radar reflections from aurora are presented, which were obtained at Roshchino (60.2°n.lat., 29.5°e.long.), with the records of the variations of the magnetic field at Voyeykov (59.9°n.lat., 30.7°e. long.). The observations at Roshchino were conducted at the frequency of 72 Mc with the aid of a radar outfit with a rotating antenna. Because the main direction in which the signals, received at Roshchino, arrive, coincides approximately with the magnetic meridian, the majority of reflections, which are characterized by the distance of 700-750 km, must have arisen at a longitude close that

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A005/A001

The Connection of Radar Reflections From Aurora With Disturbances of the Earth's Magnetic Field

of Voyeykov. Therefore, the variations of the magnetic field measured at this station were used for the estimation of simultaneous variations of the field in the reflection zones. The analysis of the results, which were obtained during the period from June 1957 to July 1958, points out the good average correlation of the radio reflections from the aurora with disturbances of the magnetic field. It is ascertained that the radioreflections are chiefly observed during the periods of decreasing horizontal component of the magnetic field (H). The observed distances of reflections are chiefly confined to the limits from 500 to 1,000 km for all values of Δ H. The results of observations made it possible to determine the distribution of probability of the reflections reception at given values of distance and disturbance of the Earth's magnetic field. The distribution mentioned shows that the increase in the arrival frequency of reflected signals for Δ H $<$-16 is much sharper than at values of Δ H nearer the values of the quiet field, whereat the possibility is not excluded that the maximum probability of radioreflection reception corresponds to values of Δ H smaller than the observed ones. Obviously, the decrease of the H-component of the magnetic field at the Earth's surface corresponds to such a variation of the field in the ionosphere, which

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A005/A001

The Connection of Radar Reflection From Aurora With Disturbances of the Earth's Magnetic Field

shifts the region, geometrically favorable for the formation of reflections, towards a zone of the highest electron concentration. The calculation of the altitude of a signal reflection should apparently be conducted reasonably from the condition of the perpendicularity of the ray to magnetic lines of force, assuming approximately that the permanent part of the field at the points of reflections is equal to its value at the Earth's surface. In case of an altitude of reflection, decreasing with decreasing H, the observation data would point out the increase of the mean electron concentration toward the altitudes smaller than 120-130 km. This seems to be probable if taking into account the situation of the sporadic E-layer during magnetic disturbances.

L. Yerasova

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

89795

3,1810
9,9000 (also 1036)

S/169/61/000/003/012/022
A005/A005

Translation from: Referativnyy zhurnal, Geofizika, 1961, No. 3, pp. 23-24, # 3G220

AUTHOR: Pogorelov, V. I.

TITLE: Concise Survey on the Results From Radar Observations at the Roshchino Station

PERIODICAL: V sb.: "Spektr., elektrofotometr. i radiolokats. issled. polyarn. siyaniy i svecheniya nochnogo neba". No. 2-3. Moscow, AN SSSR, 1960, pp. 32-36 (English summary)

TEXT: Results are presented from radar observations of polar lights at a frequency of 72 Mc, which were carried out at Roshchino (near Leningrad) from July 1957 to March 1958. The directivity pattern of the radar antenna has a main lobe under an angle of 10° with respect to the horizon. The inclination angle of the lobe can be varied within small limits and is adjusted for observations equal to the angle of most probable directions of incidence of the reflected signals. The statistical analysis of the reflections shows that the maximum number of reflections refers to the distance of 700 km and the aximuth 10° e.long. (0° corresponds to the direction to geographical North). The distribution of the echoes in

Card 1/2

Concise Survey on the Results From Radar Observations at the Roshchino Station

distance depends on the 24-hour time. The widening of the azimuth and distance ranges proceeds at the instance of appearance of intense reflections; hereat the duration of their observations increases. If it is taken into account that the magnetic declination of Roshchino amounts to $\approx +6^{\circ}$, and the angle between the geomagnetic and geographic meridian is about $\approx -21^{\circ}$, so it is necessary to assume, from the standpoint of the Chapman theory, for the explanation of the obtained results that the magnetic field in the zone of occurrence of reflection regions little differs from the field at the Earth's surface and, consequently, is sharply distinct from the geomagnetic one. The reflections tend to concentration in directions corresponding to the Chapman condition in case that the magnetic field at the reflection altitudes has a structure which approximates not to the geomagnetic field, but to the magnetic one near the Earth's surface. The data from observations of reflections arriving from a defined azimuth made it possible to obtain the distribution of the reflecting regions over the altitudes. The altitude of every region was determined from the equation $(r.F) = 0$ which expresses the perpendicularity condition of the vector r of the wave propagation direction and the directivity vector of the magnetic field F of Earth at the reflection point.

L. Yerasova

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

83857
S/049/60/000/007/002/003
E032/E514

9.9000

AUTHOR: Pogorelov, V. I.

TITLE: Comparison of Parameters of Radio Echoes with Magnetic Field Variations During Auroras

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1960, No.7, pp.1082-1085

TEXT: The present paper is based on results of 4 m observations obtained at the Roshchino Station ($\varphi = 60°.2$; $\lambda = 29°.6$) and magnetic measurements at Voyeykovo ($\varphi = 59°.9$; $\lambda = 30°.7$) carried out largely during the I.G.Y. Measurements were made of the range and the azimuths of regions of ionization which appear during magnetic storms and in polar auroras. The maximum range which could be determined with the apparatus was 1200 km. The measurements were carried out at intervals of 15 min during special and regular intervals as a part of the I.G.Y. programme. An attempt was made to obtain a quantitative comparison between parameters of radio echoes and variations in the horizontal component of the Earth's magnetic field. Variations in the vertical component were not taken into account.

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Comparison of Parameters of Radio Echoes with Magnetic Field Variations During Auroras

It was found that the magnetic field at an altitude of about 100 km is considerably different from the dipole field and approximates to the magnetic field at the Earth's surface. The present results tend to support the Chapman (Ref.3) hypothesis (wave vector perpendicular to the Earth's magnetic field vector) rather than the Kaiser hypothesis (Ref.1) (reflection zones associated with a narrow band of geomagnetic latitudes). Diurnal changes in the mean reflection ranges can be explained by diurnal variations in the magnetic field. In the case of sporadic disturbances, the effect of variations in the magnetic field on radio echoes can be explained by assuming that the reduction in the H-component leads to a displacement of the region which is geometrically most favourable for producing echoes to regions with larger values of anomalous ionisation. For an undisturbed field, the Chapman condition for ranges exceeding 800 km for the Roshchino Station corresponds to altitudes greater than 110 km. However, if the reduction in the H-component on the Earth's surface during

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sporadic disturbances is also accompanied by a reduction in this component at an altitude of 110 km, then one should observe, and it was indeed observed, a rapid increase in the probability of echoes from larger ranges. A typical graph of the probability of reflection P as a function of the H-component for a sporadic disturbance of the field during polar auroras is shown in Fig.3 (r = 700-800 km). Fig.4 shows the mean azimuths of echoes as functions of disturbances in the H-component. Acknowledgments are expressed to V. I. Krasovskiy and B. A. Bagaryatskiy.
There are 4 figures and 7 references: 2 Soviet and 5 English.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki atmosfery (Academy of Sciences USSR, Institute of Physics of the Atmosphere)

SUBMITTED: September 25, 1959

Card 3/3

S/563/60/000/208/001/001
I034/I234

AUTHOR: Pogorelov, V.I.

TITLE: Local resistances in the laminar flow of liquids

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy. no. 208. Moscow, 1960. Gidrotekhnika, 10-20

TEXT: The article reviews recent papers by seven Soviet authors on the determination of the coefficients of local resistance in the laminar flow of liquids. The article proceeds to describe experimental work carried out by the author in 1952/53 with different oils for determining the coefficients of local resistance in installations incorporating valves. The apparatus

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Local resistances ...

used is described and the results for different extents of valve opening are given and discussed. The conclusions arrived at are: 1. Head losses due to local resistances are proportional to the first power of the velocity, while the coefficient of local resistance is inversely proportional to the Reynolds number. 2. The equivalent length of pipe conduit depends only on the nature of the local resistance and does not depend on the viscosity of the liquid. 3. The critical value of the Reynolds number in the presence of local resistance becomes considerably reduced and, for a valve apparatus with lateral outlet, stands at $Re_{cr} \approx 100$. 4. In the transition zone, the character of the function $\zeta = f(Re)$ depends on the nature of the local resistance. There are 9 figures.

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POGORELOV, V. I.

Description and scheme of a hydraulic pressure transformer and some problems concerning its theoretical foundation. Trudy LPI no.208:21-28 '60. (MIRA 13:9)
(Hydraulic presses)

31805
S/203/61/001/005/010/028
A006/A101

9,9847

AUTHOR: Pogorelov, V.I.

TITLE: On the effect of magnetic variations on the reflection of radiowaves by ionization zones of aurora polaris

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 5, 1961, 687 - 694

TEXT: The author studied the effect of variations of a magnetic field on scattering of radiowaves by heterogeneities of the E_s-layer, applicable to results of radar sounding of aurora polaris regions within a frequency range of 20 - 800 megacycles. It is shown that by taking into account this phenomenon, it is possible to explain the nature of the frequency dependence of the scattering factor, if the length of heterogeneities is considered to be equal to 20 - 40 m. Studying the effect of the intensity of magnetic disturbances on the width of the reflection zone, it was found that the latter increased at a greater disturbance. This phenomenon is confirmed by experimental data. The asymmetry of the reflection band observed is possibly due to variations of the magnetic field. One of the regularities revealed by radar investigations is that if the transmitter and the receiver of the locator are combined, the reflections arrive from zones which

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On the effect of magnetic variations ...

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are concentrated around a curve in the space. This curve is determined by equations $H(r - r_1) = 0$ (1) and $|r| = \text{const}$ (2), where H is the vector of the magnetic field in the reflection point, r, r_1 are radius-vectors of the reflection and location points of the locator. The author thanks V.M. Bovsheverov and V.I. Tatarskiy for their assistance. There are 1 figure and 14 references: 6 Soviet-bloc and 8 non-Soviet-bloc.

ASSOCIATION: Institut fiziki atmosfery AN SSSR (Institute of Physics of the Atmosphere, AS USSR)

SUBMITTED: July 29, 1961

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S/203/62/002/001/007/019
I023/I223

AUTHOR: Pogorelov, V.I.

TITLE: Fluctuations of electron density in ionization zones of auroras

PERIODICAL: Geomagnetizm i Aeronomiya, v.2, no.1, 1962, 68-70

TEXT: The root-mean-square (r.m.s.) value of electron density fluctuations in the aurora region is calculated for different correlation functions. For a correlation function of the type $\exp\left\{-\sum_{i=1}^{3} x_i^2/2L_i^2\right\}$ (X_i - coordinate differences; L_i - constants, different for different i because of the anisotropy of the electron density), $(\overline{\Delta N^2})^{1/2} = (6\text{-}15)\cdot 10^4$ electrons/cm^3. For a correlation function of the type $\exp\left\{-\left(\sum_{i=1}^{3} x_i^2/L_i^2\right)^{1/2}\right\}$, $(\overline{\Delta N^2})^{1/2}$ = (4-10) x 10^4 electrons/cm^3. The r.m.s. values were calculated by using experimental data obtained at Roshchino (60.2°N, 29.6°E).

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Fluctuations of electron density...

The fluctuations of the magnetic field can change the value of $(\overline{\Delta N^2})^{1/2}$ by a factor of 1.7.

ASSOCIATION: Institut Fiziki atmosfery Akademii nauk SSSR (Institute of Atmospheric Physics, Academy of Sciences USSR)

SUBMITTED: October 25, 1961

Card 2/2

3,18,C

AUTHOR: Pogorelov, V. I.

S/203/62/002/002/007/017
1046/1246

TITLE: Mechanism of auroral form element formation

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 2, 1962, 275–285

TEXT: Analyzing the electrostatic oscillations in a nonquasilinear electron-proton stream moving along an external uniform magnetic field (cylindrical and linear symmetry), the author arrives at the spatial distribution of small oscillations of the stream parameters and at the corresponding dispersion equation. All phenomena considered in the work are governed by the equations of the drift theory. The most stable configurations of the auroral corpuscular streams that emerge from the results can account for the formation of the particular elements of the auroral froms.

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ASSOCIATION: Institut fiziki atmosfery AN SSSR (Institutes of Atmospheric Physics AS USSR)

SUBMITTED: January 3, 1962

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S/203/62/002/006/005/020
A001/A101

AUTHOR: Pogorelov, V. I.

TITLE: The stationarity of corpuscular streams corresponding to most often occurring shapes of auroras

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 6, 1962, 1076 - 1079

TEXT: The author analyzes the causes of origination of most often occurring auroral shapes, considered as focused streams. Since the main features of a stream configuration are fixed in the process of its motion along the Earth's magnetic field at an altitude of about 1,000 km, the state of the stream medium is analyzed on the basis of the drift theory equations, equations of field, the law of conservation of the number of particles, and the law of changes of partial pressure, neglecting collisions of particles. No restriction is imposed on the type of particles, although the streams under investigation are mainly composed of protons and electrons. The system of coordinates is selected in such a way that one of them is Z coordinate and the two others are parallel to vectors E and $H_\perp$ of the geomagnetic field. Then the problem of determining a stationary

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shape of the stream is reduced to finding the conditions under which the vector V, characterizing the concentration and velocity of the components of the medium, has a corresponding orientation at each point of the plane perpendicular to axis Z. It was found that conditions necessary and sufficient for the stream to be stationary are the following: 1) $R_1 = 0$, 2) $R_1 = \text{const}$, R_1 being curvature of isolines of the stream cross section. In the first case, every characteristic of the stream depends on coordinate x_1 only; in the second case isolines are circles with the same center, i.e., the stream has a cylindrical symmetry. These conclusions coincide with observational evidence that the most stable shapes of auroras are individual arcs and individual rays. All other shapes are subject to deformations when intensities and velocities of streams vary, which occurs always in auroras.

ASSOCIATION: Institut fiziki atmosfery AN SSSR (Institute of Physics of Atmosphere AS USSR)

SUBMITTED: August 3, 1962

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OSIPOV, Petr Yegorovich, kand. tekhn. nauk; YAKOVLEV, G.D., kand. tekhn. nauk, dots. st. nauchn. sotr., retsenzent; DMITRIYEV, Yu.Ya., dots., kand. tekhn. nauk, retsenzent; POGORELOV, V.I., red.

[Hydraulics and hydraulic machinery] Gidravlika i gidravlicheskie mashiny. Izd.2., perer. i dop. Moskva, Lesnaia promyshlennost', 1965. 362 p. (MIRA 18:7)

1. Kafedra vodnogo transporta lesa Vsesoyuznogo zaochnogo lesotekhnicheskogo instituta (for Yakovlev).